

CLAIMS

1. An encryption apparatus, comprising:

hold means for holding a part or all input data with a trigger signal and resetting the held data with a reset signal;

one or a plurality of counters that count up or count down the count values with the trigger signal and reset the count values to predetermined values with the reset signal;

10 encryption means for encrypting the data held by the hold means and one or a plurality of count values of the one or plurality of counters;

15 calculation means for calculating the output of the encryption means and input data that are input from the outside according to a predetermined rule, encrypting the input data, and outputting the encrypted data;

20 a path that inputs a part or all the encrypted data that are output from the calculation means to the hold means; and

25 signal generation means for generating the trigger signal and the reset signal supplied to the hold means and the one or plurality of counters according to a predetermined rule and/or at predetermined timing.

2. The encryption apparatus as set forth in claim 1,

wherein a fixed value is input to the  
encryption means, and

5                   wherein the encryption means encrypts the  
fixed value, the data held by the hold means, and the  
one or plurality of count values.

3.                 The encryption apparatus as set forth in  
claim 1,

10                 wherein the reset signal that resets the data  
held by the hold means is supplied to the hold means at  
timing in synchronization with the reset signal  
supplied to at least one of the one or plurality of  
counters.

4.                 The encryption apparatus as set forth in  
claim 1,

15                 wherein the input data are picture data, and  
                      wherein the reset signal that resets the hold  
means is in synchronization with the picture data.

5.                 The encryption apparatus as set forth in  
claim 4,

20                 wherein the reset signal that resets the hold  
means is in synchronization with each line of the  
picture data.

6.                 The encryption apparatus as set forth in  
claim 1,

25                 wherein the input data are picture data, and  
                      wherein the reset signal that resets at least  
one of the one or plurality of counters is in

synchronization with the picture data.

7. The encryption apparatus as set forth in  
claim 6,

5 wherein the reset signal that resets at least  
one of the one or plurality of counters is in  
synchronization with each frame of the picture data.

8. The encryption apparatus as set forth in  
claim 6,

10 wherein the reset signal that resets at least  
one of the one or plurality of counters is in  
synchronization with each line of the picture data.

9. An encryption method, comprising the steps  
of:

15 holding a part or all input data with a  
trigger signal and resetting the held data with a reset  
signal;

counting up or down the count values with the  
trigger signal and resetting the count values to  
predetermined values with the reset signal;

20 encrypting the data held at the hold step and  
one or a plurality of count values at the count step;

calculating the output at the encryption step  
and input data that are input from the outside  
according to a predetermined rule, encrypting the input  
25 data, and outputting the encrypted data;

inputting a part or all the encrypted data  
that are output at the calculation step to the hold

step; and

generating the trigger signal and the reset signal supplied to the hold step and the count step according to a predetermined rule and/or at predetermined timing.

5 10. An encryption program that causes a computer device to execute an encryption method, the encryption method comprising the steps of:

10 holding a part or all input data with a trigger signal and resetting the held data with a reset signal;

counting up or down the count values with the trigger signal and resetting the count values to predetermined values with the reset signal;

15 encrypting the data held at the hold step and one or a plurality of count values at the count step;

calculating the output at the encryption step and input data that are input from the outside according to a predetermined rule, encrypting the input data, and outputting the encrypted data;

20 inputting a part or all the encrypted data that are output at the calculation step to the hold step; and

25 generating the trigger signal and the reset signal supplied to the hold step and the count step according to a predetermined rule and/or at predetermined timing.

11. A record medium from which a computer device can read an encryption program that causes the computer device to execute an encryption method, the encryption method comprising the steps of:

5 holding a part or all input data with a trigger signal and resetting the held data with a reset signal;

10 counting up or down the count values with the trigger signal and resetting the count values to predetermined values with the reset signal;

15 encrypting the data held at the hold step and one or a plurality of count values at the count step;

20 calculating the output at the encryption step and input data that are input from the outside according to a predetermined rule, encrypting the input data, and outputting the encrypted data;

25 inputting a part or all the encrypted data that are output at the calculation step to the hold step; and

30 generating the trigger signal and the reset signal supplied to the hold step and the count step according to a predetermined rule and/or at predetermined timing.

12. A decryption apparatus that decrypts encrypted data encrypted by an encryption apparatus that comprises hold means for holding a part or all input data with a trigger signal and resetting the held

data with a reset signal; one or a plurality of counters that count up or count down the count values with the trigger signal and reset the count values to predetermined values with the reset signal; encryption means for encrypting the data held by the hold means and one or a plurality of count values of the one or plurality of counters; calculation means for calculating the output of the encryption means and input data that are input from the outside according to a predetermined rule, encrypting the input data, and outputting the encrypted data; a path that inputs a part or all the encrypted data that are output from the calculation means to the hold means; and signal generation means for generating the trigger signal and the reset signal supplied to the hold means and the one or plurality of counters according to a predetermined rule and/or at predetermined timing, the decryption apparatus comprising:

hold means for holding a part or all input data with a trigger signal and resetting the held data with a reset signal;

one or a plurality of counters that count up or count down the count values with the trigger signal and reset the count values to predetermined values with the reset signal;

encryption means for encrypting the data held by the hold means and one or a plurality of count

values of the one or plurality of counters;

calculation means for calculating the output of the encryption means and input data that are input from the outside according to a predetermined rule, encrypting the input data, and outputting the encrypted data;

a path that inputs a part or all the encrypted data that are input from the outside to the hold means; and

signal generation means for generating the trigger signal and the reset signal supplied to the hold means and the one or plurality of counters according to a predetermined rule and/or at predetermined timing.

13. The decryption apparatus as set forth in claim 12,

wherein a fixed value is input to the encryption means, and

wherein the encryption means encrypts the fixed value, the data held by the hold means, and the one or plurality of count values.

14. The decryption apparatus as set forth in claim 12,

wherein the reset signal that resets the data held by the hold means is supplied to the hold means at timing in synchronization with the reset signal supplied to at least one of the one or plurality of

counters.

15. The decryption apparatus as set forth in  
claim 12,

5 wherein the encrypted data are encrypted  
picture data, and

wherein the reset signal that resets the hold  
means is in synchronization with the picture data.

16. The decryption apparatus as set forth in  
claim 15,

10 wherein the reset signal that resets the hold  
means is in synchronization with each line of the  
picture data.

17. The decryption apparatus as set forth in  
claim 12,

15 wherein the encrypted data are encrypted  
picture data, and

wherein the reset signal that resets at least  
one of the one or plurality of counters is in  
synchronization with the picture data.

20 18. The decryption apparatus as set forth in  
claim 17,

wherein the reset signal that resets at least  
one of the one or plurality of counters is in  
synchronization with each frame of the picture data.

25 19. The decryption apparatus as set forth in  
claim 17,

wherein the reset signal that resets at least

one of the one or plurality of counters is in synchronization with each line of the picture data.

20. A decryption method of decrypting encrypted data encrypted in an encryption method, the encryption method comprising the steps of holding a part or all input data with a trigger signal and resetting the held data with a reset signal; counting up or down the count values with the trigger signal and resetting the count values to predetermined values with the reset signal; encrypting the data held at the hold step and one or a plurality of count values at the count step; calculating the output at the encryption step and input data that are input from the outside according to a predetermined rule, encrypting the input data, and outputting the encrypted data; inputting a part or all the encrypted data that are output at the calculation step to the hold step; and generating the trigger signal and the reset signal supplied to the hold step and the count step according to a predetermined rule and/or at predetermined timing, the decryption method comprising the steps of:

holding a part or all input data with a trigger signal and resetting the held data with a reset signal;

25. counting up or down the count values with the trigger signal and resetting the count values to predetermined values with the reset signal;

encrypting the data held at the hold step and  
one or a plurality of count values at the count step;

calculating the output at the encryption step  
and input data that are input from the outside  
according to a predetermined rule, encrypting the input  
data, and outputting the encrypted data;

inputting a part or all the encrypted data  
that are input from the outside to the hold step; and

generating the trigger signal and the reset  
signal supplied to the hold step and the count step  
according to a predetermined rule and/or at  
predetermined timing.

21. A decryption program that causes a computer  
device to execute a decryption method of decrypting  
15 encrypted data encrypted in an encryption method, the  
encryption method comprising the steps of holding a  
part or all input data with a trigger signal and  
resetting the held data with a reset signal; counting  
up or down the count values with the trigger signal and  
resetting the count values to predetermined values with  
20 the reset signal; encrypting the data held at the hold  
step and one or a plurality of count values at the  
count step; calculating the output at the encryption  
step and input data that are input from the outside  
according to a predetermined rule, encrypting the input  
data, and outputting the encrypted data; inputting a  
25 part or all the encrypted data that are output at the

calculation step to the hold step; and generating the trigger signal and the reset signal supplied to the hold step and the count step according to a predetermined rule and/or at predetermined timing, the decryption method comprising the steps of:

5 holding a part or all input data with a trigger signal and resetting the held data with a reset signal;

10 counting up or down the count values with the trigger signal and resetting the count values to predetermined values with the reset signal;

15 encrypting the data held at the hold step and one or a plurality of count values at the count step;

20 calculating the output at the encryption step and input data that are input from the outside according to a predetermined rule, encrypting the input data, and outputting the encrypted data;

25 inputting a part or all the encrypted data that are input from the outside to the hold step; and

generating the trigger signal and the reset signal supplied to the hold step and the count step according to a predetermined rule and/or at predetermined timing.

22. A record medium from which a computer device can read a decryption program that causes the computer device to execute a decryption method of decrypting encrypted data encrypted in an encryption method, the

encryption method comprising the steps of holding a part or all input data with a trigger signal and resetting the held data with a reset signal; counting up or down the count values with the trigger signal and resetting the count values to predetermined values with the reset signal; encrypting the data held at the hold step and one or a plurality of count values at the count step; calculating the output at the encryption step and input data that are input from the outside according to a predetermined rule, encrypting the input data, and outputting the encrypted data; inputting a part or all the encrypted data that are output at the calculation step to the hold step; and generating the trigger signal and the reset signal supplied to the hold step and the count step according to a predetermined rule and/or at predetermined timing, the decryption method comprising the steps of:

20 holding a part or all input data with a trigger signal and resetting the held data with a reset signal;

counting up or down the count values with the trigger signal and resetting the count values to predetermined values with the reset signal;

25 encrypting the data held at the hold step and one or a plurality of count values at the count step;

calculating the output at the encryption step and input data that are input from the outside

according to a predetermined rule, encrypting the input data, and outputting the encrypted data;

inputting a part or all the encrypted data that are input from the outside to the hold step; and

5 generating the trigger signal and the reset signal supplied to the hold step and the count step according to a predetermined rule and/or at predetermined timing.

10